

REMARKS

This Amendment and Response is being submitted in response to the non-final Office Action mailed May 10, 2006. Claims 1-33 are pending in the Application. Claim 14 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1, 2, 7-9, 13-16, 21-23, and 27-33 stand rejected under 35 USC 102 (b) as being anticipated by Huang (U.S. Patent No. 6,342,578). Claims 1, 2, 3, 15, 16, and 18 stand rejected under 35 U.S.C. 102(b) as being anticipated by Malhorta (U.S. Patent No. 5,663,029). Claims 1, 2, 6, 15, 16, and 20 stand rejected under 345 U.S.C. 102(b) as being anticipated by Johnson et al. (U.S. Patent No. 6,372,813). Claims 1, 2, 8, 10, 15, 22, and 24 stand rejected under 35 U.S.C. 102(b) as being anticipated by Pfaendner et al. (U.S. Patent No. 5,693,681). Claims 11 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Yamamoto (JP Patent No. 06100767A). Claims 2, 3, 5, 6, 16, 17, 19, and 20 stand rejected under 35 USC 103(a) as being unpatentable over Huang in view of Moeller (U.S. Patent No. 6,630,050).

CLAIM REJECTION – 35 U.S.C. §112

Claim 14 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, the Examiner states that claim 14 includes parenthesis, which render the claim indefinite with respect to the gas component.

The Applicants have amended Claim 14 as follows:

14. (Currently Amended) The resin of claim 1, wherein said additive is selected from the group of colorants, anti-slip agents, flame retardants, antioxidants, ~~gas (oxygen and carbon dioxide)~~ oxygen gas barrier agents, carbon dioxide gas barrier agents, oxygen scavengers, ultraviolet (UV) radiation absorbers, acetaldehyde reducing agents, crystallization control agents, impact modifiers, catalyst deactivators, melt strength enhancers, anti-static agents, lubricants, chain extenders, nucleating agents, solvents, fillers, plasticizers, and a mixture of two or more of these.

In light of the amendments to claim 14, the Applicant respectfully submits that the current rejection is moot, and requests its immediate withdrawal.

CLAIM REJECTION – 35 U.S.C. §102

Claims 1, 2, 7-9, 13-16, 21-23, and 27-33 stand rejected under 35 U.S.C. 102 (b) as being anticipated by Huang (U.S. Patent No. 6,342,578).

Huang discloses a copolyester of polyethylene terephthalate, and a dicarboxylic acid or its ester equivalent, and an anhydride of either succinic, glutaric, benzoic, maleic, and phthalic anhydride. The resin composition exhibits reduced stress cracking when exposed to caustic solutions, such as cleaning supplies.

As recognized by the Examiner, Huang does not disclose the use of substituted cyclic anhydrides. The Applicants have amended claims 1, 15, 32, and 33. As amended, claim 1 reads as follows:

1. (Currently Amended) A resin comprising the reaction product of either polyamide with substituted cyclic anhydride or polyester with substituted cyclic anhydride, said reaction product also containing an additive.

Claims 15, 32, and 33 are similarly amended. Support for the amendment can be found in claim 2 of the Application as filed. In light of the amendments to claim 1, the Applicants respectfully submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

Claims 1, 2, 4, 15, 16, and 18 stand rejected under 35 U.S.C. 102(b) as being anticipated by Malhorta (U.S. Patent No. 5,663,029).

Similar to Huang '578 applied above, Malhorta does not disclose the use of substituted cyclic anhydrides. The Applicants have amended claims 1, 15, 32, and 33. As amended, claim 1 reads as follows:

1. (Currently Amended) A resin comprising the reaction product of either polyamide with substituted cyclic anhydride or polyester with substituted cyclic anhydride, said reaction product also containing an additive.

Claim 15 is similarly amended. Support for the amendment can be found in claim 2 of the Application as filed. In light of the amendments made to claim 1, the Applicants respectfully submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

Claims 1, 2, 6, 15, 16, and 20 stand rejected under 345 U.S.C. 102(b) as being anticipated by Johnson et. al (U.S. Patent No. 6,372,813).

Similar to Huang '578, and Malhorta '029 applied above, Johnson et al. do not disclose the use of substituted cyclic anhydrides. The Applicants have amended claims 1 and 15. As amended, claim 1 reads as follows:

1. (Currently Amended) A resin comprising the reaction product of either polyamide with substituted cyclic anhydride or polyester with substituted cyclic anhydride, said reaction product also containing an additive.

Claim 15 is similarly amended. Support for the amendment can be found in claim 2 of the Application as filed. In light of the amendments made to claim 1, the Applicants respectfully submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

Claims 1, 2, 8, 10, 15, 22, and 24 stand rejected under 35 U.S.C. 102(b) as being anticipated by Pfaendner et al. (U.S. Patent No. 5,693,681).

Similar to Huang '578, Malhorta '029, and Johnson et al. '813 do not disclose the use of substituted cyclic anhydrides. The Applicants have amended claims 1 and 15. As amended, claim 1 reads as follows:

1. (Currently Amended) A resin comprising the reaction product of either polyamide with substituted cyclic anhydride or polyester with substituted cyclic anhydride, said reaction product also containing an additive.

Claim 15 is similarly amended. Support for the amendment can be found in claim 2 of the Application as filed. In light of the amendments made to claim 1, the Applicants respectfully submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. 103(A)

Claims 11 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Yamamoto (JP Patent No. 06100767A). The Examiner admits that Huang does not disclose the use of Polyethylene naphthalate or a copolyester of a polyethylene naphthalate copolymer. However, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the polyethylene terephthalate in Huang with polyethylene naphthalate because “Yamamoto teaches a resin of polyethylene naphthalate to be functionally equivalent to a resin formed by polyethylene terephthalate.” The Applicants respectfully disagree.

As pointed out above, Huang does not disclose a substituted cyclic anhydride. Yamamoto does not overcome this deficiency. In light of the amendments to claims 1 and 15, which currently rejected claims 11 and 25 depend from, the Applicants submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

Claims 2, 3, 5, 6, 16, 17, 19, and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Moeller (U.S. Patent No. 6,630,050). The Examiner admits that Huang does not include the use of substituted succinic anhydride, substituted phthalic anhydride, or substituted maleic anhydride. The Examiner concludes however, that it would have been obvious to one of ordinary skill in the art at the time of the invention to interchange the above anhydrides with the anhydrides taught by Huang to tailor the reactivity of the cyclic anhydride with the polyester. The Applicants respectfully disagree.

Contrary to the Examiner’s position, the court’s have long held that the field of chemistry and chemical reactions is unpredictable. See, e.g. *In re Marzocchi*, (“the well-

known unpredictability of chemical reactions”).<sup>1</sup> If one skilled in the art cannot readily anticipate the effect of a change within the subject matter to which that claimed invention pertains, then there is lack of predictability in the art. If the art itself is unpredictable, then replacing an anhydride with a substituted anhydride cannot be obvious.

By way of example, U. S. Patent 5,244,917 column 2, lines 44-49, states “the term ‘substituted’ as used herein, means that one or more hydrogen on the designated item is replaced with selection from the indicated group, provided that the designated atoms’ normal valency is not exceeded, and that the substitution results in a stable compound”. It is clear to one skilled in the art what is meant by “substituted” as a chemical word used frequently in the art, and that one of ordinary skill in the art would not find it obvious to replace a “substituted” molecule for an “unsubstituted” one.

Furthermore, the Applicant points out that Moeller is specific to polyurethane compounds, which are not claimed by the Applicant. There is no disclosure in any of the cited references that would lead one of ordinary skill in the art to replace a substituted anhydride used in the present polyamide/polyester system, with a component that is only disclosed as useful in a polyurethane system. Such a piecemeal rejection simply does not meet the Examiner’s requirement to provide a *prima facie* case of obviousness.

In light of the arguments presented, the Applicants submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

Claims 12, and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Saunders. The Examiner admits that Huang does not disclose the use of a polyamide. However, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to include in Huang the use of nylon 6 and nylon 6,6 as cheap alternatives for the polymer resin. The Applicant respectfully disagrees.

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<sup>1</sup> *In re Marzocchi*, 439 F.2d 220, 223-24, 169 USPQ 367, 368-70 (CCPA 1971)

While nylon 6 and nylon 6,6 may well be cheap alternatives, the Examiner again is attempting to combine two dissimilar references that simply cannot be combined. Huang is specific to a polyester using unsubstituted anhydrides. The fact that Nylon may be a “cheap alternative” does not mean that the nylon system is combinable with the other cited reference. There is nothing in either of the two references that would lead one of ordinary skill in the art to substitute a polyamide system into a polyester system. If the Examiner is going to reject the polyamide claims, it is incumbent on the Examiner to find prior art where a polyamide system discloses the invention as claimed. Such a piecemeal rejection as presently provided simply does not meet the Examiner’s requirement to provide a *prima facie* case of obviousness.

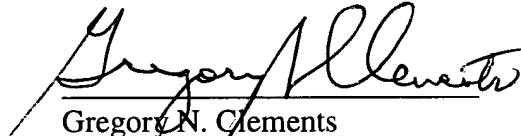
In light of the amendments to claims 1 and 15, which currently rejected claims 12 and 26 depend from, and the arguments presented herein, the Applicants submit that the current rejection has been traversed, and its immediate withdrawal is therefore respectfully requested.

CONCLUSION

Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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